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ABSTRACT

This paper provides an example of how elementary school curriculum leaders can be mindful of student intelligences and can utilize the strengths of their student populations. It presents the findings from a national study that examined how 17 schools using a curriculum based on Multiple Intelligences Theory improved the self-concept and positive learning outcomes of students with attention deficit hyperactivity disorder (ADHD). The research examined the predominant intelligences, self-concept, and achievement levels of 87 elementary students with ADHD and sought to determine their levels of success in School Using Multiple Intelligences Theory (SUMIT). The study found that the intelligences of students with ADHD in SUMIT sites were not intelligences that are emphasized in the traditional school setting. Elementary students with ADHD who attended SUMIT sites reported an average self-concept, contraindicating the widely held belief that low self-concept can be noted among students with ADHD. Teachers reported average achievement levels for students with ADHD, which indicated that students with ADHD in SUMIT sites fare better than students in traditional elementary schools. The study also found that students with ADHD in SUMIT sites felt positive with regard to academic tasks. A case study of one SUMIT site is presented. (Contains 13 references.) (CR)

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Mindful Curriculum Leadership for Students with Attention Deficit Hyperactivity Disorder (ADHD): Leading in Elementary Schools by Using Multiple Intelligences Theory (SUMIT ©)

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Mindful Curriculum Leadership for Students with Attention Deficit Hyperactivity Disorder (ADHD): Leading in Elementary Schools by Using Multiple Intelligences Theory (SUMIT ©)

Introduction

Broadly based, mindful curriculum leadership encompasses a way of leading toward school improvement by taking into consideration student intelligences as an at-promise phenomenon. This research paper provides an example of how elementary school curriculum leaders can be mindful of student intelligences and utilize the strengths of their student populations. It presents the findings from a national study that examined how schools using a Multiple Intelligences Theory-based curriculum improved the self-concept and positive learning outcomes of students with ADHD.

Varying the curriculum to meet the needs of students has been explored through a variety of pedagogical avenues. However, curriculum leadership has not moved beyond the accountability features of the prevailing standards-based movement. Normally these connections have been linked to statewide testing mechanisms, embodying the major task in the question "Does the school curriculum reflect and embody current state imposed curriculum standards?" This approach is backward and fails to take into consideration the child's interest or intelligence.

Mindful curriculum leadership is in keeping with Henderson and Hawthorne's (1995) notion of a pedagogically centered curriculum practice which can be defined as ensuring that "the primary focus of the curriculum be on the well-being of the child as learner" (p. 53). Mindful curriculum leadership can best be defined as leadership practice that takes place in elementary classrooms which is intended to have teachers base their curricular decisions on the intelligences of the child.

Background Conceptual Framework

The traditional curriculum of public schools is heavily composed of two (linguistic, logical-mathematical) of the eight recognized intelligences (Gardner, 1993). Gardner states that curriculum developers "have not been cognizant of the ways in which basic inclinations of human learning turn out to be ill-matched to the agenda of the modern secular school" (Jordan, 1996, p. 32). In keeping with Gardner's (1993) contention, mindful curriculum leadership advocates that curricular attention be paid to the differing cognitive profiles and needs of all students at the primary level. This paper investigates the impact of a multiple intelligences curriculum on students who have been diagnosed with ADHD. Although believed to be only a small population of students within the elementary classroom, curriculum leaders need to be mindful of the means by which the learning needs of students with ADHD can be met by a curriculum driven by Multiple Intelligences Theory.

Significance

Students with ADHD are "frequently encountered problem in the regular classroom" (Francis as cited in Dyson, 2000, p. 3 ADHD, p.3). These students "not only experience academic and social difficulties but often disrupt classroom activities and other's learning" (Bender & Mathes, 1995; DuPaul & Stoner as cited in Dyson, 2000, p.3). Classroom management and learning problems among this population have been strongly linked to formal education particularly at the formative elementary level (Sylva, 1992). This clearly indicates a need for curricular strategies that enhance academic and positive self-concept levels in students with ADHD. Burgeoning research in the field of multiple intelligences (MI) offers hope for students with ADHD.

Purpose

This study presents findings from a national study that examined how schools using a Multiple Intelligences Theory-based curriculum improved the self-concept and positive learning outcomes of students with ADHD. This research examined the predominant intelligences, self-concept, and achievement level of elementary students with ADHD and sought to determine their level of success in School Using Multiple Intelligences Theory (SUMIT ©). The findings provide preliminary insights into how curriculum leaders at the elementary school level can utilize a multiple intelligences curriculum to meet the needs of students with ADHD, a population that has typically been overlooked and under-served in the traditional elementary school classroom.

Methodology

By employing an exploratory quantitative and qualitative descriptive methodology, a purposeful sample of eighty-seven students with ADHD in grades two through seven and their teachers in 17 SUMIT © sites around the country was chosen for this study. SUMIT © sites were identified by Project SUMIT © at Harvard University as schools using effective implementations of Multiple Intelligences Theory.

Data Sources

Information was collected using three sources of data: The Multiple Intelligences Developmental Assessment Scale (MIDAS), the Piers-Harris Children's Self-Concept Scale (PHCSCS), and the Teacher Perception of Achievement Level in Students with ADHD Survey. Student participants responded to two instruments. The first instrument was the Multiple Intelligences Developmental Assessment Scale (MIDAS). The MIDAS instrument generated a multiple intelligences profile in response to the 93 questions

answered on the instrument. The MIDAS Profile provided information regarding each student's intellectual development, activities, and propensities.

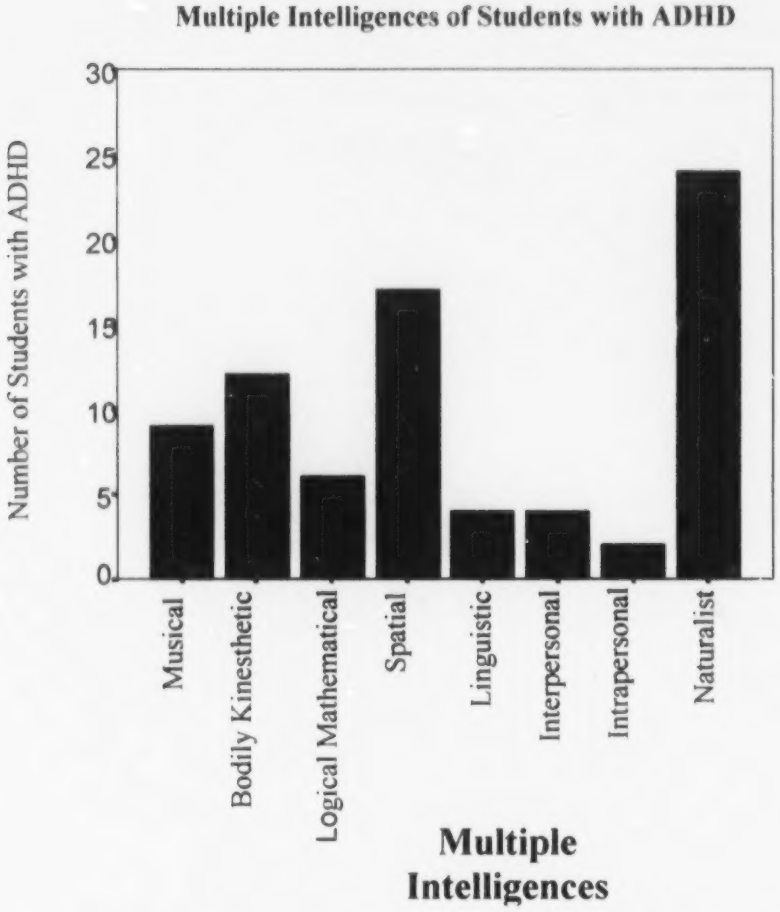
The second instrument was the Piers-Harris Children's Self-Concept Scale (PHCSCS), subtitled, "The Way I Feel About Myself," a self-report measure designed to evaluate self-concept. The PHCSCS was an 80-item, self-report questionnaire designed to assess self-concept in children. The overall score generated reflected a general feeling of self-concept and the cluster scales provided a more detailed assessment within a specific dimension. There were six major areas within the general self-concept area: Behavior, Intellectual and School Status, Anxiety, Popularity, Physical Appearance and Attributes, and Happiness and Satisfaction.

Teacher participants responded to the Teacher Perception of Achievement Level of Students with ADHD Survey. This instrument served to identify a student's current level of academic achievement. This was done on a scale which ranged from one to five, one being very much above average and five being very much below average. The Teacher Perception of Achievement Level of Students with ADHD Survey was designed to assess the teacher's perception of achievement level as well as self-concept and predominant intelligences of students with ADHD.

Data Analysis & Findings

Quantitative findings suggest that over half the students with ADHD reported that they possess the naturalist (30.8%) and spatial (21.8%) intelligences as their predominant intelligences.

Predominant Intelligences: Possessing exceptional cognitive strength in one or two of the eight intelligences.



This study concludes that the pattern of intelligences of students with ADHD in SUMIT © sites are not intelligences that are emphasized in the traditional school setting. Elementary students with ADHD who attend SUMIT © sites reported an average self-concept, contraindicating the widely held belief that low self-concept can be noted among students with ADHD. Teachers reported average achievement levels for students with ADHD, indicating that students with ADHD in SUMIT © sites fare better than do those

students in traditional elementary schools, disconfirming reports that students with ADHD often fall below grade level (Zentall, 1993).

The Spearman rank-order correlation coefficient (r_s), or rho, was employed to determine the degree of a nonparametric relationship between teacher perception of both achievement level and self-concept at the ordinal level. The correlation between achievement level and self-concept in students with ADHD in SUMIT © sites was .461, moderate yet significant at the .01 level. Likewise, a similar relationship indicated the correlation between intellectual and school status and self-concept on the Piers Harris Children's Self-Concept Scale in students with ADHD in SUMIT © sites was .774, high and significant at the .01 level. This study concluded that students with ADHD in SUMIT © sites felt positive with regard to academic tasks.

CASE STUDY

Lincoln Elementary School, located in a suburban community in the northeast section of the United States, comprised the case study portion of this research. The Lincoln Elementary School was selected for this studying of a case on the advice of Dr. Kornhaber (1999), principal investigator at Project SUMIT ©. The data were triangulated through interviews (student, parent, teacher, principal) and student artifacts (work documents and report cards). Open, axial, and selective coding procedures were utilized (Strauss & Corbin, 1990). The weaving together of the qualitative data with above mentioned quantitative measures provided a compelling portrait of the intelligences, self-concept, and achievement level of three students with ADHD located at one SUMIT © site.

Three elementary students with ADHD are profiled in case narratives. Two students were in third grade and one student was in second grade. All three students were Caucasian and identified with ADHD, Attention-Deficit/Hyperactivity Disorder, as diagnosed by a physician or psychologist according to criteria set forth in the Diagnostic Statistic Manual DSM-IV, 1994. Two students were identified as predominantly inattentive the other student was identified as predominantly hyperactive. All are taking medication for this disorder. The pattern among the predominant intelligences in the three students included the naturalist, spatial, and bodily-kinesthetic intelligences. The three students with ADHD at this particular SUMIT © site demonstrated a pattern of intelligence which is noticeably different from the language-logic profile highly valued in schools and society. Provided with a curriculum that taught to their strengths, these students expressed a higher level of competence and self-assuredness across a wide range of cognitive and interpersonal situations that has been found among students with ADHD in more traditional curricular settings.

Conclusions

Kugelmass (1996) states that "when significant discrepancies exist between students' primary intelligence and those intelligences valued in traditional school settings (linguistic, logical mathematical), such students become victimized by labels of failure. School principals can engage in mindful curriculum leadership guiding teachers to base their curricular decisions on the intelligences of the student. Mindful curriculum leaders can utilize the intelligences of student populations to improve learning outcomes. Such mindful curriculum leadership is a way of providing a positive learning environment for

students with ADHD and may be the curricular response needed to further the goal of having students with ADHD live up to their fullest intellectual and emotional potential.

Implications for Classroom Practice

Mindful curriculum leadership practice should focus not on the disability nor should it serve to remediate which has been the more traditional approach taken with students with ADHD. Rather it should focus on ability, or the student's predominant intelligences. MI curriculum provides ways to personalize education for students with ADHD, many of whom find it difficult to succeed in school. In traditional schools for example, of the 11 year-olds, 80% of students with ADHD were two years below grade level in reading, spelling, math, or written language (Anderson, Williams, McGee, &Silva, 1987 as cited in Zentall, 1993). In SUMIT © sites, students with ADHD achieved average success (grades on report card) in school.

Susan, a third grader who attends a SUMIT © site, has the naturalist and spatial intelligences as her predominant intelligences. The presence of Susan's proclivity toward the naturalist and spatial intelligences has its roots in early childhood. Her childhood experiences reveal an interest in science, which now extends to the present day. "She has a great love of nature, animals, the outdoors..." (Susan's mother, 1999). Susan's proclivity toward the naturalist intelligence is well fortified with evidence. When asked, "What do you like best about school? What are you best at in school?" Susan responded pointedly, "I think I'm good at science." The responses to interview questions teem with examples of her affinity for earth science (rock collection), her ability to discern patterns of life (butterflies) and interest in natural forces (electricity) and scientific-type inquiry

(balloon experiment). As mindful curriculum leaders one would want to capitalize on her biological potential to process information in order to achieve positive school outcomes.

On her most recent report card results, science is the only area she earned an "A." A further probe extends an understanding of her life as student. "Anything else that you're really good at in school? She sheepishly admitted, "Um, not that I really know of." "What kind of student are you?," Susan divulged, "Not really [smart] cuz I saw my report card and it's sort of bad" (student interview, 1999). As the majority of students in this study and in the literature, Susan admits that reading, spelling, and math is difficult. However, if directed in a positive fashion the naturalist and spatial intelligences can be employed to improve skills in school. As mindful curriculum leaders one must assist and encourage teachers to make bridges between areas of weakness (i.e. reading) to areas of strengths (i.e. utilize predominant intelligences). Nonetheless, the school trajectory for students with ADHD continues to look bleak.

By adolescence, over 50% of students with ADHD had experienced school failure (Barkley, 1992 et al., Brown & Borden, 1986; Minde et al., 1971 as cited in Zentall, 1993). Carol, an adolescent with ADHD in middle school has cognitive strengths in the areas of interpersonal intelligence (thinks by bouncing ideas off other people) and spatial intelligence (thinks in images and pictures). Carol shows a preference for school work which taps into her interpersonal intelligence. Both Carol and her mother state difficulty in French. Carol's mother states, "she does struggle with her foreign language." Carol concurs, "I don't like French...the genders confuse me etc." However, when Carol was allowed to employ her interpersonal intelligence by engaging in a game of charades to learn French verbs she found success. "I believe I got a 98 on that [French] test just

because of the charades." Mindful curriculum leaders train teachers to be MI assessors to determine cognitive profiles. Mindful curriculum leaders train teachers to be curriculum brokers to make connections between predominant intelligences and curriculum to improve learning outcomes.

A MI curriculum not only provides ways to personalize an individual's education but it can be used to cultivate desired results such as a passion for life goals and career. As students with ADHD enter their final years of education, 33% failed to finish high school (Weiss & Hechtman, 1986 as cited in Zentall, 1993). "They are at increased risk for school failure, poor social relationships, auto accidents, delinquency, substance abuse and poor vocational outcome" (Brown, 1998, p. 34). Mark, a 16 year-old student with ADHD attends an alternative high school. He lacks motivation in his schoolwork which reflects in poor grades. He also abuses drugs. One of his cognitive strengths lies in the area of spatial intelligence (thinks in images and pictures). Mark shows a preference for school work which taps into his spatial intelligence. While both Mark and his father state history as an area of difficulty, Mark illustrates how he can learn history using visualization, a spatial learning strategy. "I'll picture things for example if we're studying the French Revolution... Louis the 16th.... I'll picture something.... I'll have a picture of him in my mind, even though I haven't seen him... [and I'll visualize] the castle and peasants [to help me learn]." Oftentimes it is society who deems what is important to teach in education (i.e. math) to live responsibly (i.e. math is needed to balance a check book). Mindful curriculum leaders look at populations that may not do well in school such as some students with ADHD, honor their cognitive profiles, and make curriculum connections to what needs to be learned to live responsibly.

Gardner (2000) states, "The most important moment in a child's education is the crystallizing experience: when the child connects to something that engages curiosity and stimulates further exploration..." (AERA, 2000). Many of the problems students with ADHD experience may relate to formal education (how teachers implement curriculum) particularly at the formative elementary level; Sylva (1992) stated, "that the long-term effects of early education are mediated by enhanced educational aspiration and motivation, not cognitive skills per se" (abstract). Mindful curriculum leaders provide a curriculum where students have the opportunity to explore the eight intelligences ensconced in a myriad of disciplines/domains. Once a student finds success, s/he is better able to serve himself and society.

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